

Amendments to the Specification:

Please replace the pending paragraph on page 16, lines 12-24 with the following amended paragraph:

The only data link between printbar **10** and sensor **30**, through which information is passed, is the light transfer. Sensor **34** generates a readout current I_s which is carried on feedback circuit lines **38, 39**. This sensor readout current I_s is delivered to a comparator **112**, and compared to an external reference current I_R . The value of external reference I_R is a parameter of the system set by a user or during system design. Comparator **112** measures the difference between readout current I_s and reference current I_R to obtain an offset current I_{OFFSET} , which is delivered to current/voltage converter **114**, and this voltage is in turn provided to analog-to-digital (A-/D) converter **116**. In this embodiment A-/D converter **116** is shown as a four-bit A-/D converter. These four bits are routed to a set of low frequency shift-registers being used as an electronic look-up table **118**, which in this embodiment is comprised of four shift registers **118a-d**. Each bit of data enters the shift registers and ripples through as shown by arrow **120**.